STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 127319

TO: Shailendra Kumar **Location: 5d61 / 5c18** **Sunday, July 25, 2004** **Art Unit: 1621** **Phone: 272-0640** **Serial Number: 10 / 612609**	**From: Jan Delaval** **Location: Biotech-Chem Library** **Rem 1A51** **Phone: 272-2504** **jan.delaval@uspto.gov**

Search Notes

Jan please

Access DB# 127319

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: S. Kumar Examiner #: 69594 Date: 7/15/04
Art Unit: 1621 Phone Number ~~30~~ 272-0640 Serial Number: 10/612,609
Mail Box and Bldg/Room Location: REM 5D61 5C18 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Chiral chelating agent and chiral catalyst

Inventors (please provide full names): Kwunmin Chen et al.

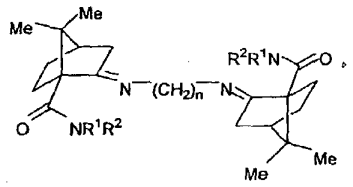
Earliest Priority Filing Date: 2/27/03

Jan 7/25/04

File:10566USF.RTF

WHAT IS CLAIMED IS:

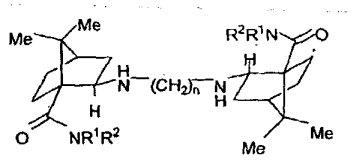
1.A chiral chelating agent having a formula (1) as follows and an enantiomeric isomer thereof:



(1)

wherein R^1 and R^2 represent H, methyl, ethyl, a primary, secondary or tertiary straight, branched or cyclic alkyl group having 3-7 carbon atoms, a heterocyclic or aromatic group, an aromatic group substituted at the 2-, 3- or 4-position, an aromatic-like group, or a naphthyl or naphthyl-derived group, and n is an integer between 0 and 4.

2.A chiral chelating agent having a formula (2) as follows and an enantiomeric isomer thereof:



(2)

wherein R^1 and R^2 represent H, methyl, ethyl, a primary, secondary or tertiary straight, branched or cyclic alkyl group having 3-7 carbon atoms, a heterocyclic or aromatic group, an aromatic group substituted at the 2-, 3- or 4-position, an aromatic-like group, or a naphthyl or naphthyl-derived group, and n is an integer between 0 and 4.

3.A chiral chelating agent having a formula (3) as follows and an enantiomeric isomer thereof:

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 15:28:08 ON 25 JUL 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   23 JUL 2004  HIGHEST RN 715654-51-6
DICTIONARY FILE UPDATES:  23 JUL 2004  HIGHEST RN 715654-51-6

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que l8
L1                STR
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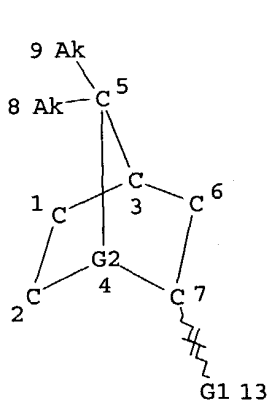

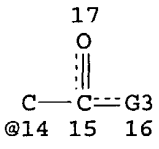

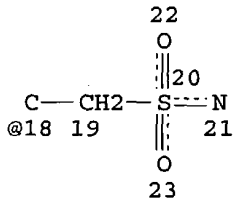

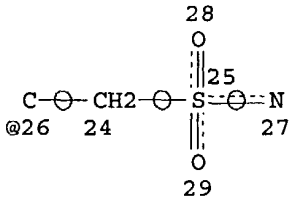


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VAR G2=14/18/26
VAR G3=O/N
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC   7
NUMBER OF NODES IS  26
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STEREO ATTRIBUTES: NONE
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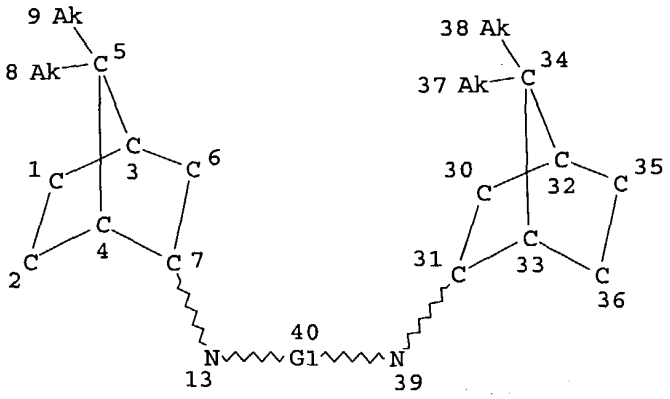
L6 STR



REP G1=(0-1) AK
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 8
CONNECT IS E1 RC AT 9
CONNECT IS E1 RC AT 37
CONNECT IS E1 RC AT 38
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 34 7
NUMBER OF NODES IS 21

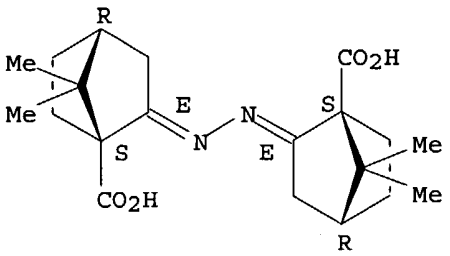
STEREO ATTRIBUTES: NONE
L8 4 SEA FILE=REGISTRY SUB=L5 SSS FUL L6

100.0% PROCESSED 64 ITERATIONS 4 ANSWERS
SEARCH TIME: 00.00.01

=> d ide can tot l8

L8 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500224-35-1 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-azinobis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H28 N2 O4
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties); USES (Uses)

Absolute stereochemistry.
Double bond geometry as shown.



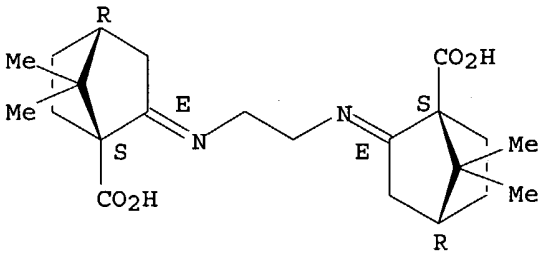
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:204497

L8 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500224-32-8 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyldinitrilo)bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H32 N2 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

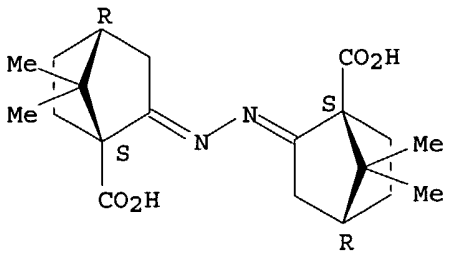
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:204497

L8 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
RN 423770-46-1 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-azinobis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H28 N2 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry unknown.



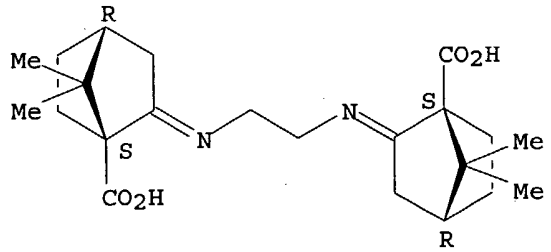
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369559

L8 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
RN 423770-45-0 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyldinitrilo)bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H32 N2 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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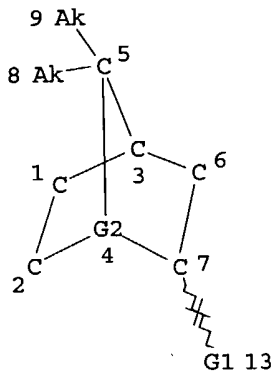
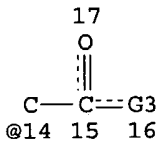
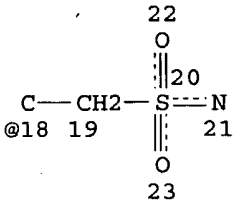
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

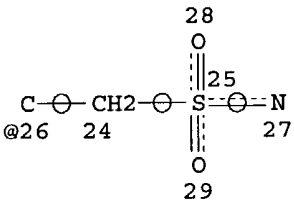
REFERENCE 1: 136:369559

=> d sta que l11
L1 STR





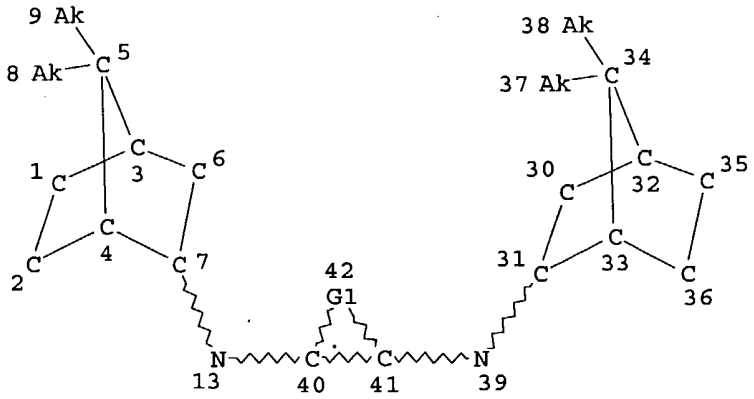




VAR G1=O/N
VAR G2=14/18/26
VAR G3=O/N
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 7
NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE
L5 2534 SEA FILE=REGISTRY SSS FUL L1
L9 STR



REP G1=(0-4) C
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 8
CONNECT IS E1 RC AT 9
CONNECT IS E1 RC AT 37
CONNECT IS E1 RC AT 38

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 31 7
NUMBER OF NODES IS 23

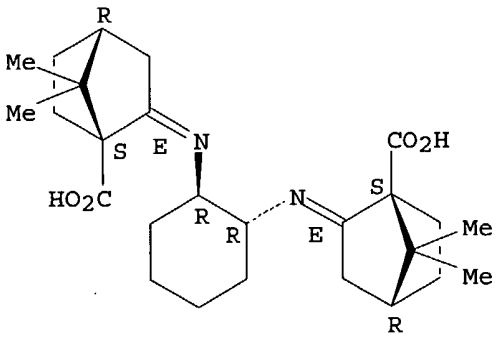
STEREO ATTRIBUTES: NONE
L11 6 SEA FILE=REGISTRY SUB=L5 SSS FUL L9

100.0% PROCESSED 6 ITERATIONS 6 ANSWERS
SEARCH TIME: 00.00.01

=> d ide can tot l11

L11 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500224-34-0 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1R,2R)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H38 N2 O4
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties); USES (Uses)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

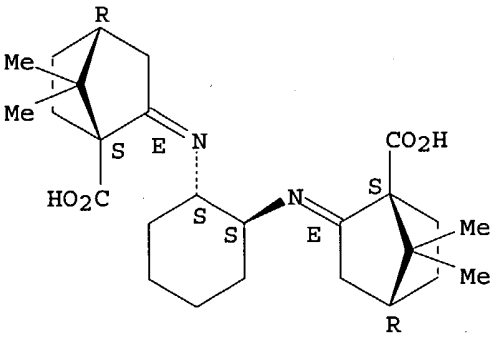
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:204497

L11 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500224-33-9 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1S,2S)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H38 N2 O4
SR CA

LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



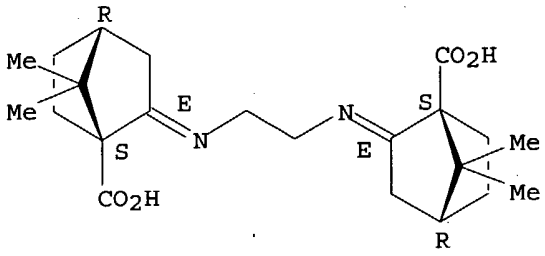
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:204497

L11 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500224-32-8 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyldinitrilo)bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H32 N2 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry as shown.



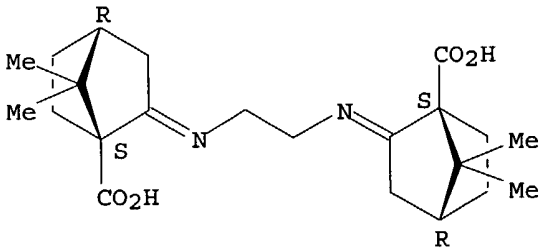
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:204497

L11 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 423770-45-0 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyldinitrilo)bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H32 N2 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry unknown.



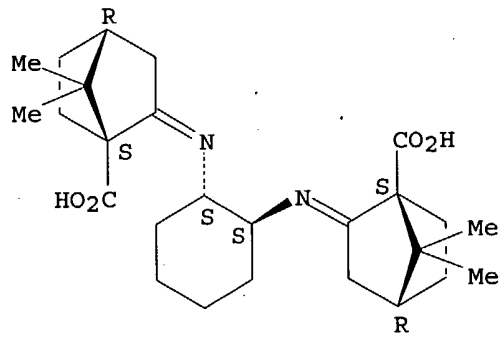
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369559

L11 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 404582-36-1 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1S,2S)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H38 N2 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

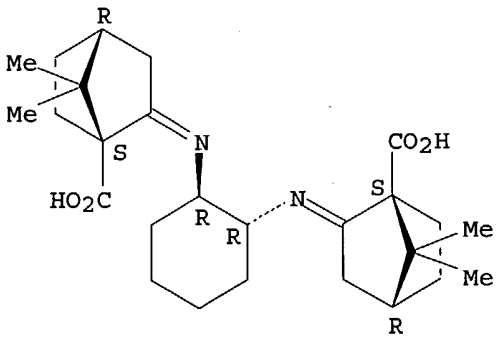
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369559

REFERENCE 2: 136:247173

L11 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 404582-34-9 REGISTRY
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1R,2R)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H38 N2 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.
Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369559

REFERENCE 2: 136:247173

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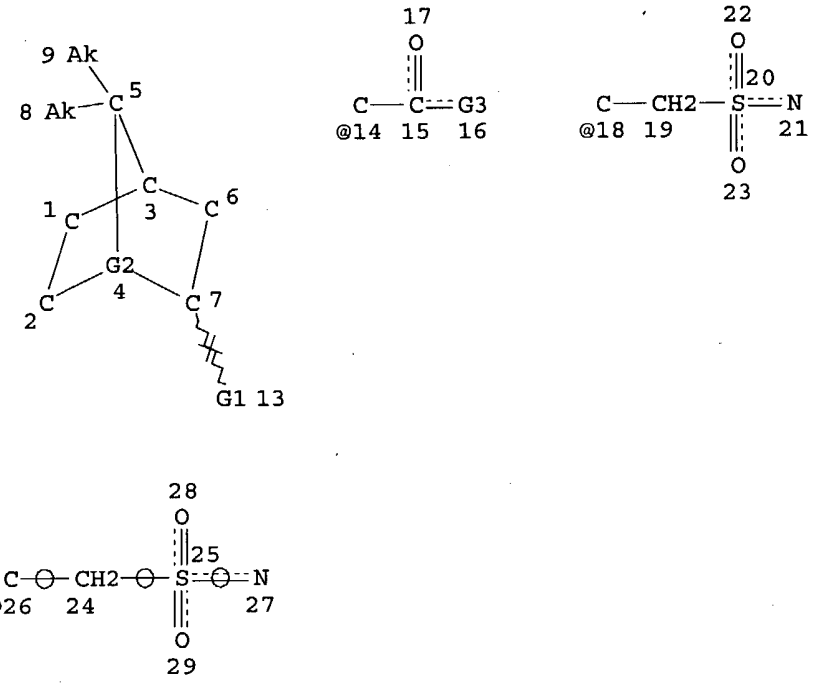

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VAR G2=14/18/26
VAR G3=O/N
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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 7
NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE
L5 2534 SEA FILE=REGISTRY SSS FUL L1
L12 11 SEA FILE=REGISTRY ABB=ON PLU=ON L5 AND C6-C6/ES AND NR>=8
L13 0 SEA FILE=REGISTRY ABB=ON PLU=ON L12 NOT (S OR P)/ELS

=> d his

(FILE 'HOME' ENTERED AT 14:57:50 ON 25 JUL 2004)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 14:58:00 ON 25 JUL 2004
L1 STR
L2 13 S L1
L3 STR L1
L4 0 S L3
L5 2534 S L1 FUL
SAV TEMP KUMAR612/A L5
L6 STR L3
L7 0 S L6 SAM SUB=L5
L8 4 S L6 FUL SUB=L5
SAV L8 TEMP KUMAR612A/A
L9 STR L6
L10 0 S L9 SAM SUB=L5
L11 6 S L9 FUL SUB=L5

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                SAV TEMP L11 KUMAR612B/A
L12            11 S L5 AND C6-C6/ES AND NR>=8
L13             0 S L12 NOT (S OR P)/ELS

     FILE 'HCAPLUS' ENTERED AT 15:19:56 ON 25 JUL 2004
                E CHEN K/AU
L14          1611 S E3-E35
                E CHEN KWUN/AU
L15            22 S E5
                E YANG K/AU
L16           583 S E3-E24
                E YANG KUNG/AU
L17            11 S E7,E8
                E LEE W/AU
L18          2515 S E3-E63
                E LEE WEI/AU
L19            39 S E3,E10
                E PAN J/AU
L20           473 S E3-E29
                E PAN JIA/AU
L21             5 S E3,E5
L22             4 S E26
L23             3 S L8,L11
L24             3 S L14-L22 AND L23
L25            23 S L14-L22 AND P/DT
                E TW2003-92104138/AP,PRN
L26             1 S L14-L22 AND TW/PC,PRC,AC
L27           741 S L5
L28             6 S L14-L22 AND L27
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 15:27:22 ON 25 JUL 2004
L29            12 S E1-E12
L30             4 S L29 NOT L8,L11

     FILE 'USPATFULL, USPAT2' ENTERED AT 15:27:57 ON 25 JUL 2004
L31             0 S L8 OR L11

     FILE 'REGISTRY' ENTERED AT 15:28:08 ON 25 JUL 2004

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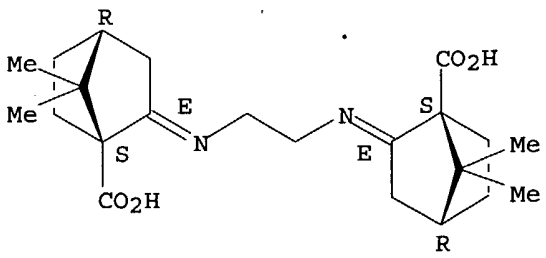
=> d l24 all hitstr tot

L24 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:977476 HCAPLUS
DN 138:204497
ED Entered STN: 29 Dec 2002
TI Chiral Lewis Acid-Catalyzed Asymmetric Baylis-Hillman Reactions
AU **Yang, Kung-Shuo; Lee, Wei-Der; Pan, Jia-Fu; Chen, Kwunmin**
CS Department of Chemistry, National Taiwan Normal University, Taipei, 116, Taiwan
SO Journal of Organic Chemistry (2003), 68(3), 915-919
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
CC 21-2 (General Organic Chemistry)
Section cross-reference(s): 75
OS CASREACT 138:204497
AB An effective chiral Lewis acid-catalyzed asym. Baylis-Hillman reaction is described. Good to high enantioselectivities were obtained using 3 mol % chiral catalyst. Novel camphor-derived dimerized ligands were prepared from the condensation of (+)-ketopinic acid with diamines and hydrazine under acidic conditions. When α-naphthyl acrylate was used as a Michael acceptor, the reaction is complete within 20 min with high stereoselectivity and in reasonable chemical yields.
ST Baylis Hillman asym chiral Lewis acid catalyst
IT Addition reaction
(Baylis-Hillman, stereoselective; chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT Asymmetric synthesis and induction
(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT Lewis acids
RL: CAT (Catalyst use); USES (Uses)
(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT Ligands
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chiral; chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT Addition reaction catalysts
(stereoselective, Baylis-Hillman; chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT 52093-26-2, Lanthanum(III) triflate
RL: CAT (Catalyst use); USES (Uses)
(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT **500224-32-8P 500224-33-9P**
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT 75-07-0, Acetaldehyde, reactions 78-84-2, Isobutyraldehyde 96-33-3, Methyl acrylate 100-52-7, Benzaldehyde, reactions 104-53-0, 3-Phenylpropanal 107-15-3, Ethylenediamine, reactions 123-11-5, p-Anisaldehyde, reactions 123-38-6, Propionaldehyde, reactions 555-16-8, 4-Nitrobenzaldehyde, reactions 937-41-7, Phenyl acrylate 1121-22-8, trans-1,2-Cyclohexanediamine 1663-39-4, tert.-Butyl acrylate 2043-61-0, Cyclohexanecarboxaldehyde 2495-35-4, Benzyl acrylate 20069-66-3, 1-Naphthyl acrylate 40724-67-2, (+)-Ketopinic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT 500166-64-3P 500166-69-8P 500166-70-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

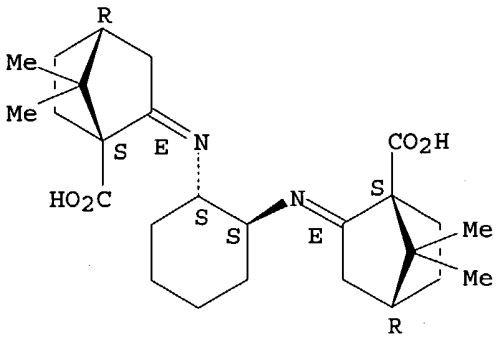
(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT 108945-27-3P 112572-93-7P 140238-43-3P 140630-33-7P 189372-86-9P
221346-91-4P 293307-67-2P 500166-63-2P 500166-65-4P 500166-66-5P
500166-67-6P 500166-68-7P 500166-71-2P 500166-72-3P 500166-73-4P
500166-74-5P 500166-75-6P 500166-76-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
IT **500224-34-0P 500224-35-1P**
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(crystal structure of)
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Aggarwal, V; J Chem Soc, Chem Commun 1996, P2713 HCAPLUS
(2) Aggarwal, V; J Org Chem 1998, V63, P7183 HCAPLUS
(3) Barrett, A; J Chem Soc Chem Commun 1998, P2533 HCAPLUS
(4) Barrett, A; J Chem Soc, Chem Commun 1995, P1755 HCAPLUS
(5) Basavaiah, D; Tetrahedron 1996, V52, P8001 HCAPLUS
(6) Brzezinski, L; J Am Chem Soc 1997, V119, P4317 HCAPLUS
(7) Ciganek, E; Org React 1997, V51, P201 HCAPLUS
(8) Corey, E; J Am Chem Soc 1994, V116, P3611 HCAPLUS
(9) Drewes, S; Tetrahedron 1988, V44, P4653 HCAPLUS
(10) Drewes, S; Tetrahedron:Asymmetry 1992, V3, P255 HCAPLUS
(11) Hahn, F; Chem Ber 1990, V123, P481 HCAPLUS
(12) Hayase, T; J Chem Soc, Chem Commun 1998, P1271 HCAPLUS
(13) Ishihara, K; J Org Chem 2000, V65, P9125 HCAPLUS
(14) Iwabuchi, Y; Am Chem Soc 1999, V121, P10219 HCAPLUS
(15) Iwabuchi, Y; Chem Commun 2001, P2030 HCAPLUS
(16) Iwabuchi, Y; Tetrahedron Lett 2001, V42, P7867 HCAPLUS
(17) Kundig, E; Tetrahedron Lett 1993, V34, P7049
(18) Langer, P; Angew Chem, Int Ed 2000, V39, P3049 HCAPLUS
(19) Lee, W; Chem Commun 2001, P1612 HCAPLUS
(20) Noyori, R; Asymmetric Catalysis in Organic Synthesis 1994
(21) Oishi, T; Tetrahedron:Asymmetry 1995, V6, P1241 HCAPLUS
(22) Ojima, I; Catalytic Asymmetric Synthesis 1993
(23) Pan, J; J Mol Catal A: Chem 2001, V176, P19 HCAPLUS
(24) Sartor, D; Synlett 1990, P197 HCAPLUS
(25) Takasu, M; Synlett 1990, P194 HCAPLUS
(26) Yang, K; Org Lett 2000, V2, P729 HCAPLUS
(27) Yang, K; Org Lett 2002, V4, P1107 HCAPLUS
IT **500224-32-8P 500224-33-9P**
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chiral Lewis acid-catalyzed asym. Baylis-Hillman reactions)
RN 500224-32-8 HCAPLUS
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyldinitrilo)bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



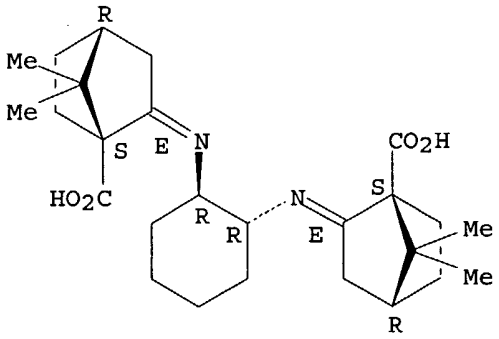
RN 500224-33-9 HCAPLUS
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1S,2S)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



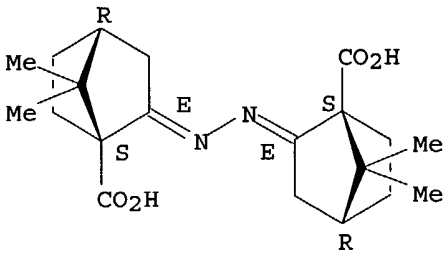
IT **500224-34-0P 500224-35-1P**
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(crystal structure of)
RN 500224-34-0 HCAPLUS
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1R,2R)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



RN 500224-35-1 HCAPLUS
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-azinobis[7,7-dimethyl-, (1S,1'S,2E,2'E,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L24 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:173335 HCAPLUS
DN 136:369559
ED Entered STN: 11 Mar 2002
TI Enantioselective Aziridination of Alkenes with N-Aminophthalimide in the Presence of Lead Tetraacetate-Mediated Chiral Ligand
AU **Yang, Kung-Shou; Chen, Kwunmin**
CS Department of Chemistry, National Taiwan Normal University, Taipei, 116, Taiwan
SO Organic Letters (2002), 4(7), 1107-1109
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
CC 27-3 (Heterocyclic Compounds (One Hetero Atom))
OS CASREACT 136:369559
AB Reaction of various N-alkenoyloxazolidinones with N-aminophthalimide and lead tetraacetate in the presence of camphor-derived chiral ligands provides the desired N-phthalimidoaziridines in good to high enantiomeric excess (67-95% ee) at 0 °C within 15 min. The absolute stereochem. of the corresponding aziridine derivs. was established by chemical correlations.
ST aziridination stereoselective alkenoyloxazolidinone aminophthalimide chiral ligand
IT Cycloaddition reaction
Cycloaddition reaction catalysts
(aziridination, stereoselective; enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
IT Ligands
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chiral; enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
IT Alkenes, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
IT 87-69-4, (+)-Tartaric acid, uses 546-67-8, Lead tetraacetate
RL: CAT (Catalyst use); USES (Uses)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
IT **404582-34-9P 404582-36-1P 423770-45-0P 423770-46-1P**
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)
IT 423770-47-2P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)

IT 423770-56-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)

IT 107-15-3, Ethylenediamine, reactions 464-78-8, Ketopinic acid 2043-21-2 20439-47-8, (1R,2R)-1,2-Cyclohexanediamine 21436-03-3, (1S,2S)-1,2-Cyclohexanediamine 31978-13-9 109299-92-5 109299-93-6 109299-94-7 227024-93-3 423770-49-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)

IT 423770-51-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)

IT 1875-48-5, N-Aminophthalimide
RL: RGT (Reagent); RACT (Reactant or reagent)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)

IT 151-56-4DP, Aziridine, derivs. 332923-24-7P 332923-28-1P 423770-48-3P 423770-50-7P 423770-52-9P 423770-53-0P 423770-54-1P 423770-55-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

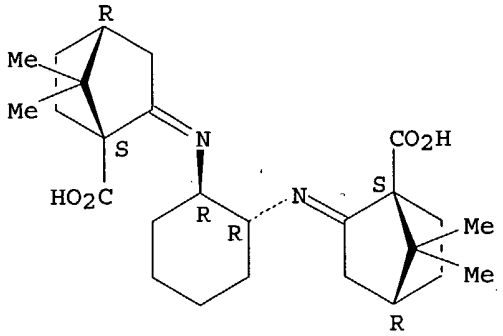
(1) Yang, K; J Org Chem 2001, V66, P1676 HCAPLUS

IT **404582-34-9P 404582-36-1P 423770-45-0P 423770-46-1P**
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(enantioselective aziridination of alkenes with N-aminophthalimide in the presence of lead tetraacetate and a chiral ligand)

RN 404582-34-9 HCAPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1R,2R)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

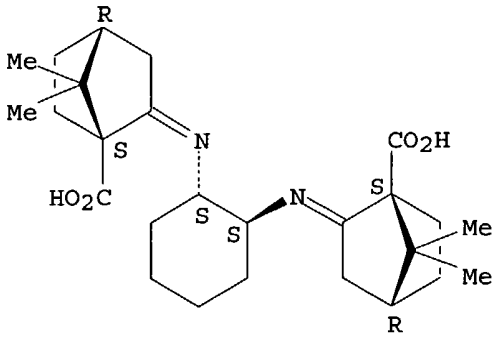


RN 404582-36-1 HCAPLUS

CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1S,2S)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA

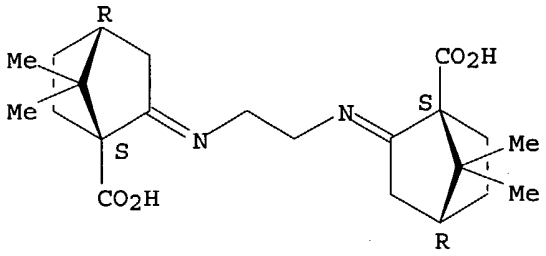
INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



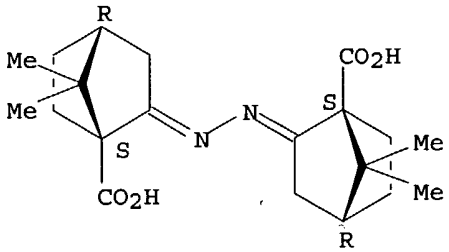
RN 423770-45-0 HCAPLUS
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-(1,2-ethanediyldinitrilo)bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 423770-46-1 HCAPLUS
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-azinobis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



L24 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:780044 HCAPLUS
DN 136:247173
ED Entered STN: 26 Oct 2001
TI A facile catalytic oxidation of activated hydrocarbons to the carbonyl functionality mediated by Mn(II) complexes

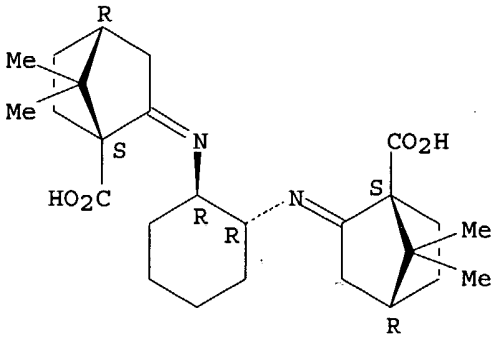
AU **Pan, Jia-Fu; Chen, Kwunmin**
CS Department of Chemistry, National Taiwan Normal University, Taipei, 116, Taiwan
SO Journal of Molecular Catalysis A: Chemical (2001), 176(1-2), 19-22
CODEN: JMCCF2; ISSN: 1381-1169
PB Elsevier Science B.V.
DT Journal
LA English
CC 21-2 (General Organic Chemistry)
OS CASREACT 136:247173
AB Selective oxidation of activated hydrocarbons to the corresponding carbonyl functionality was achieved with good to high material yields using novel camphor-derived ligands mediated with Mn(II) as catalyst. In general, the reaction proceeds smoothly with 5 mol % of catalyst and 2.0 equiv of t-BuOOH as oxidant in CH2Cl2 in 5-30 min.
ST oxidn hydrocarbon manganese camphor derived ligand
IT Oxidation catalysts
(facile catalytic oxidation of activated hydrocarbons to carbonyl compds. mediated by manganese(II) complexes)
IT Hydrocarbons, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(facile catalytic oxidation of activated hydrocarbons to carbonyl compds. mediated by manganese(II) complexes)
IT Carbonyl compounds (organic), preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(facile catalytic oxidation of activated hydrocarbons to carbonyl compds. mediated by manganese(II) complexes)
IT 638-38-0, Manganese diacetate 10025-73-7, Chromium trichloride
404582-34-9 404582-36-1
RL: CAT (Catalyst use); USES (Uses)
(facile catalytic oxidation of activated hydrocarbons to carbonyl compds. mediated by manganese(II) complexes)
IT 86-73-7, Fluorene 95-13-6, Indene 100-42-5, Styrene, reactions 103-30-0, trans-Stilbene 103-65-1, Propylbenzene 108-88-3, Toluene, reactions 110-83-8, Cyclohexene, reactions 119-64-2, 1,2,3,4-Tetrahydronaphthalene 493-05-0, Isochroman 496-11-7, Indan 496-14-0, Phthalan 613-31-0, 9,10-Dihydroanthracene 771-98-2, 1-Phenylcyclohexene
RL: RCT (Reactant); RACT (Reactant or reagent)
(facile catalytic oxidation of activated hydrocarbons to carbonyl compds. mediated by manganese(II) complexes)
IT 83-33-0P, 1-Indanone 84-65-1P, 9,10-Anthraquinone 87-41-2P, Phthalide 93-55-0P, Propiophenone 100-52-7P, Benzaldehyde, preparation 486-25-9P, Fluoren-9-one 529-34-0P, α-Tetralone 930-68-7P, 2-Cyclohexen-1-one 4702-34-5P, Isochroman-1-one 10345-87-6P, 3-Phenyl-2-cyclohexen-1-one 17488-64-1P 61463-21-6P, 1H-Inden-1-ol
RL: SPN (Synthetic preparation); PREP (Preparation)
(facile catalytic oxidation of activated hydrocarbons to carbonyl compds. mediated by manganese(II) complexes)
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Andrus, M; Tetrahedron Lett 1995, V36, P2945 HCAPLUS
(2) Choudary, B; J Org Chem 1992, V57, P5841 HCAPLUS
(3) Das, T; Tetrahedron Lett 1997, V38, P3631 HCAPLUS
(4) DattaGupta, A; Tetrahedron Lett 1996, V37, P2633 HCAPLUS
(5) Einhorn, C; J Chem Soc, Chem Commun 1997, P447 HCAPLUS
(6) Finney, N; Angew Chem Int Ed Engl 1997, V36, P1720 HCAPLUS
(7) Gokhale, A; Tetrahedron Lett 1995, V36, P1831 HCAPLUS
(8) Groves, J; J Am Chem Soc 1987, V109, P3812 HCAPLUS
(9) Hamachi, K; Tetrahedron Lett 1996, V37, P4979 HCAPLUS
(10) Hudlicky, M; ACS Monography 1990, V186 HCAPLUS
(11) Ishii, Y; J Org Chem 1995, V60, P3934 HCAPLUS
(12) Ishii, Y; Tetrahedron Lett 1996, V37, P4993 HCAPLUS

(13) Jacobsen, E; Catalytic Asymmetric Synthesis 1993, P159 HCAPLUS
(14) Katsuki, T; Coord Chem Rev 1995, V140, P189 HCAPLUS
(15) Katsuki, T; J Synth Org Chem Jpn 1995, V53, P940 HCAPLUS
(16) Kaufman, M; J Am Chem Soc 1993, V115, P11648 HCAPLUS
(17) Kawasaki, K; Tetrahedron 1997, V53, P6337 HCAPLUS
(18) Kohmura, Y; Tetrahedron Lett 2000, V41, P3941 HCAPLUS
(19) Larock, R; Comprehensive Organic Transformations: A Guide to Functional Group Preparations 1989, P591
(20) Lee, N; Tetrahedron Lett 1998, V39, P1385 HCAPLUS
(21) Levina, A; Tetrahedron Asymmetry 1995, V6, P147 HCAPLUS
(22) Li, W; Synthesis 1989, P293 HCAPLUS
(23) Linde, C; Angew Chem Int Ed Engl 1997, V36, P1723 HCAPLUS
(24) Linker, T; Angew Chem Int Ed Engl 1997, V36, P2060 HCAPLUS
(25) Ma, D; Tetrahedron Lett 1999, V40, P8915 HCAPLUS
(26) Malkov, A; Org Lett 2000, V2, P3047 HCAPLUS
(27) Matsunaka, K; Tetrahedron Lett 1999, V40, P2165 HCAPLUS
(28) Murahashi, S; Angew Chem Int Ed Engl 1995, V34, P2443 HCAPLUS
(29) Muzart, J; Chem Rev 1992, V92, P113 HCAPLUS
(30) Muzart, J; J Mol Catal 1994, V66, P155
(31) Muzart, J; Tetrahedron Lett 1987, V28, P2131 HCAPLUS
(32) Muzart, J; Tetrahedron Lett 1995, V36, P5735 HCAPLUS
(33) Pearson, A; J Org Chem 1985, V50, P2791 HCAPLUS
(34) Rispens, M; Tetrahedron Asymmetry 1995, V6, P661 HCAPLUS
(35) Sakaguchi, S; J Chem Soc, Chem Commun 1998, P2037 HCAPLUS
(36) Schulz, M; Tetrahedron Asymmetry 1998, V9, P4341 HCAPLUS
(37) Sekar, G; J Org Chem 1998, V63, P2961 HCAPLUS
(38) Shilov, A; Chem Rev 1997, V97, P2879 HCAPLUS
(39) Sodergren, M; Tetrahedron Lett 1996, V37, P7577
(40) Yamazaki, S; Org Lett 1999, V1, P2129 HCAPLUS
(41) Zhao, D; Synthesis 1994, P915 HCAPLUS
(42) Zondervan, C; Tetrahedron Asymmetry 1996, V7, P1895 HCAPLUS

IT **404582-34-9 404582-36-1**
RL: CAT (Catalyst use); USES (Uses)
(facile catalytic oxidation of activated hydrocarbons to carbonyl compds. mediated by manganese(II) complexes)

RN 404582-34-9 HCAPLUS
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1R,2R)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)

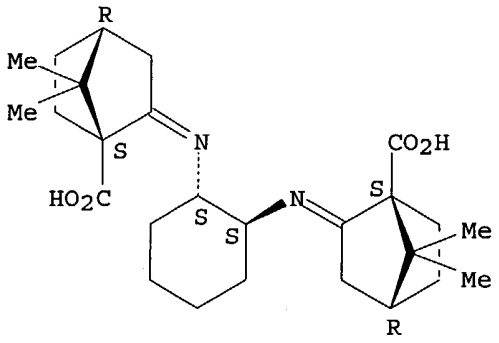
Absolute stereochemistry.
Double bond geometry unknown.



RN 404582-36-1 HCAPLUS
CN Bicyclo[2.2.1]heptane-1-carboxylic acid, 2,2'-[(1S,2S)-1,2-cyclohexanediyldinitrilo]bis[7,7-dimethyl-, (1S,1'S,4R,4'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



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